

5 CLAIMS

What is claimed is:

1. A reflector for a luminaire having a light source securable therein and openings through which light is emitted, comprising:

10 a plurality of reflector elements disposed around said light source in a manner substantially surrounding said light source in the area generally adjacent to the lowest light emitting point of said light source and continuing to the area generally adjacent to the highest light emitting point or top of said light source and wherein said light source is not physically enclosed by said reflector elements.

15 2. The reflector of claim 1 wherein said reflector elements are shaped and positioned such that substantially all of the light reflected from said reflectors is reflected at substantially the same angle and does not reflect off any other elements of said luminaire

3. The reflector of claim 1 wherein said reflector elements are shaped and positioned such that light reflected from said reflectors is reflected at varying angles.

4. The reflector of claim 1 wherein said reflector elements are held in place with a 20 lens surrounding at least a portion of said reflector.

5. The reflector of claim 1 wherein said reflector elements are held in place with a frame that is attached to a luminaire housing that substantially surrounds said light source and said reflector elements.

25 6. The reflector of claim 1 wherein said reflector elements have cross-sectional shapes that are generally parabolic in the vertical plane and generally elliptical in the horizontal plane.

7. The reflector of claim 1 wherein said reflector elements have cross-sectional shapes that are generally elliptical in the vertical plane and generally parabolic in the horizontal plane.

30 8. The reflector of claim 2 wherein there are four reflector elements symmetrically arranged in ninety degree increments around said light source.

9. The reflector of claim 2 wherein said reflector elements are placed symmetrically around said light source.

5        10. The reflector of claim 3 wherein said reflector elements are placed asymmetrically around said light source.

11. The reflector of claim 2 wherein the reflection at said angle is approximately a seventy degree angle from nadir.

10        12. The reflector of claim 1 wherein said reflector elements have a plurality of cross-sections with generally parabolic shapes in the vertical plane and generally elliptical shapes in the horizontal plane.

13. The reflector of claim 1 wherein said reflector elements have a plurality of cross-sections with generally elliptical shapes in the vertical plane and generally parabolic shapes in the horizontal plane.

15        14. A luminaire comprising:

at least one lamp;

a lamp socket for each of said lamps, wherein each of said lamp sockets is sized to receive the base of a said lamp, said lamp sockets being electrically connected to a power source and having an electrical contact and being electrically connectable to the bases of said lamps;

20        a plurality of reflector elements disposed around said lamp in a manner substantially surrounding said lamp in the area generally adjacent to the lowest light emitting point of said lamp and continuing to the area generally adjacent to the highest light emitting point or top of said lamp and wherein said lamp is not physically enclosed by said reflector elements; and

a means for holding said lamps and said reflectors.

25        15. The luminaire of claim 14 wherein said reflector elements are shaped and positioned such that substantially all of the light reflected from said reflectors is reflected at substantially the same angle and does not reflect off any other elements of said luminaire

16. The luminaire of claim 14 wherein said reflector elements are shaped and positioned such that light reflected from said reflectors is reflected at varying angles.

30        17. The luminaire of claim 14 wherein said luminaire is either integrally or remotely connected to electrical control gear.

18. The luminaire of claim 14 wherein said luminaire has a lens disposed beneath said lamps and said reflector elements.

5        19. The luminaire of claim 18 wherein said lens is disposed beneath and around said lamps and said reflector elements.

20. The luminaire of claim 18 wherein said means for holding said reflector elements is said lens.

10        21. The luminaire of claim 19 wherein said means for holding said reflector elements is said lens.

22. The luminaire of claim 14 wherein said means for holding said reflector elements is a frame attached to a luminaire housing that substantially surrounds said lamp and said reflector elements.

23. The luminaire of claim 14 wherein said luminaire has a single lamp.

15        24. The luminaire of claim 14 wherein said reflector elements have cross-sectional shapes that are generally parabolic in the vertical plane and generally elliptical in the horizontal plane.

20        25. The luminaire of claim 14 wherein said reflector elements have cross-sectional shapes that are generally elliptical in the vertical plane and generally parabolic in the horizontal plane.

26. The luminaire of claim 15 wherein there are four reflector elements symmetrically arranged in ninety degree increments around said lamp.

27. The luminaire of claim 15 wherein said reflector elements are placed symmetrically around said lamp.

25        28. The luminaire of claim 16 wherein said reflector elements are placed asymmetrically around said lamp.

29. The luminaire of claim 15 wherein the reflection at said angle is approximately a seventy degree angle from nadir.

30        30. The luminaire of claim 17 wherein said luminaire has a single HID metal halide lamp.

31. The luminaire of claim 14 wherein said reflector elements have a plurality of cross-sections with generally parabolic shapes in the vertical plane and generally elliptical shapes in the horizontal plane.

5        32. The luminaire of claim 14 wherein said reflector elements have a plurality of cross-sections with generally elliptical shapes in the vertical plane and generally parabolic shapes in the horizontal plane.

33. The luminaire of claim 14 wherein said luminaire also is comprised of a luminaire housing surrounding said lamps and said reflector elements.